Nutrition News

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FOR BETTER NUTRITION JAPAN NEEDS MORE MILK

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The Ministry of Welfare of the Japanese Government, since 1946, has been conducting a nation-wide investigation of our nutrition problems. Its findings indicate that the caloric value of the Japanese diet has risen steadily to a point approaching the normal standard. However, with respect to high-grade proteins, fat, vitamins, inorganic matter, the Japanese diet is still far below normal. Principal foods in our diet are large amounts of cereals, potatoes, and vegetables. Average amounts of food taken in an urban district per day, per person, is estimated by a nutrition survey in 1949 as follows:

Cereals	440 gm.	(15.5 oz.)
Potatoes	130 gm.	(4.6 oz.)
Vegetables	160 gm.	(5.6 oz.)
Fruits	40 gm.	(1.4 oz.)
Beans and products	45 gm.	(1.6 oz.)
Pickles	30 gm.	(1.1 oz.)
Sugar	8 gm.	(0.3 oz.)
Oil and fats	3 gm.	(0.1 oz.)
Fish and shell	72 gm.	(2.5 oz.)
Meats	15 gm.	(0.5 oz.)
Eggs	5 gm.	(0.2 oz.)
Milk and products	6 gm.	(0.2 oz.)
Seaweeds	5 gm.	(0.2 oz.)

Physically, Japanese continue to lag behind in height and weight as compared with even the prewar standard. Diseases such as anemia, beriberi, stomatitis caused by insufficiency in proteins or vitamins, are prevalent.

The Japanese nation needs more milk in order to lift up the health curb of our people. The general diet is grossly insufficient in calcium and in riboflavin, or vitamin B_2. The consumption of calcium per person, per day, is not quite 0.3 gram, just about a third of the standard requirement. Consumption of riboflavin is 0.5 milligram, less than half of the normal requirement.

While our diet does contain an abundance of phosphorus, our native foods offer no solution to the calcium deficiency. Furthermore, we have difficulty in finding sources of riboflavin. This condition is one of the strong arguments for advocating an increased milk supply for Japan since milk provides calcium and riboflavin abundantly.

Equally urgent is our need for the high-grade proteins in which milk is rich. We need these for our infants and children particularly, who belong in any priority list in a national nutrition schedule. Invalids are our next concern. They are a helpless group, deprived of working ability. Preponderance of sickness and infirmity reduces the health standard of the nation.

For even these two groups, milk is peculiarly important to the Japanese. Its production here has always been inadequate. With the end of war it dipped even lower.

The establishment of dairy foods recombining plants in Japan, though primarily to provide dairy foods for the American military in Japan, means much to the Japanese people.

Recombining Plants

The installation of these milk and ice cream plants was initiated at the request of the United States Army,* and five recombining plants now operate in Japan. These are located at Yokohama, Kobe, Sendai, Kokura, Sapporo. Two others are at Okinawa and Guam. These seven plants in the Far East supply milk, chocolate milk, ice cream, and other dairy products.

Scientific research is responsible for this dairy foods supply here where little milk is produced. The recombined milk is a combination of high quality butterfat and milk solids not fat, blended and processed in the plants. The ingredients, prepared from fresh milk, packed in substantially oxygen-free containers, are shipped here from the United States under refrigeration. The recombined milk and ice cream, packaged and distributed in sterile containers, retain milk's abundant and varied food values and fine flavors.

An influential contribution has been the help extended in educating the Japanese to understand how much milk can mean to them. We know of feeding experiments which have been carried on demonstrating striking examples, such as that of a baby who received milk regularly and achieved at 15 months the development of an average Japanese baby at 24 months.

Dr. Arimoto

The Japanese have not had milk readily available. Nor can they afford its daily use. The government desires to develop an adequate and economical means of production and distribution through technical advancement in Japan's dairy industry. The recombining plants operating here have shown that our people will become regular users of milk when it is available economically and when they learn what it does for them.

We are directly interested in the necessity of orienting all Japanese on milk's importance. To realize improved nutrition, education in diet is essential in every country. No matter how nourishing and how abundantly produced a food item may be, ignorance of its values hinders its use. Japan has much to overcome in this respect.

*In "A Milk Supply for the Far East," Nutrition News, April 1948, preliminary investigations were reported.

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Glances AT NUTRITION RESEARCH

Laboratory research reveals the components of food and their essentiality for good nutrition. Practical tests of the adequacy of the food supply of large populations and means of improving it follow. Thus the peoples of the world stand a better chance for being well nourished in the future.

Milk Consumption in the U.S.—There is a need for greater consumption of milk in this country. This is the conclusion reached by a nutritionist with the Bureau of Human Nutrition and Home Economics in a recently published analysis of national food consumption records and dietary surveys made among groups varying in age, economic status, and locality. Although more dairy foods were used in 1948 than in 1942, many individuals whose nutritional needs are high, still do not use enough milk. The foods purchased by four of ten city families in 1948 did not supply the amount of calcium recommended by the National Research Council. Milk is the most economical source of dietary calcium. Although urban families spent less than one-fifth of their total food budget on dairy products other than butter in the spring of 1948, those same dairy products supplied two-thirds of the calcium, one-half of the riboflavin, and one-fourth of the protein in the nation's food supply that year.

—Am. J. Public Health 41 :45 (Jan.) 1951.

Crystalline Albumin from Milk—The isolation of a crystalline albumin from cow's milk which is identical in physical, chemical, and serological properties to a crystalline albumin found in cow's blood has been reported. In view of the individual characteristics of specific proteins and the many variations between those found in blood and milk, it is of considerable interest that these fluid tissues contain an identical protein component.

—J. Biol. Chemistry 187 :349 (Nov.) 1950.

Amino Acid Requirements of Man—The second of a series of papers has appeared reporting the results of extensive investigation of the amino acid requirements of man. The paper presents evidence that threonine is an essential amino acid which must be present in food. Its removal from the diet means pronounced loss of body protein as demonstrated by a resulting negative nitrogen balance. In contrast, a dietary source of histidine is not necessary for the maintenance of nitrogen balance in normal adult man.

—J. Biol. Chemistry 188 :49 (Jan.) 1951.

Rice Enrichment in Bataan—The attempt to combat beriberi by exclusive use of enriched rice is proving effective in the Philippines. Since October 1, 1948, there has been a reduction of about 89 percent in the incidence of this disease in 7 municipalities where enriched rice has been available. Over the same period, an increase in incidence occurred in an adjacent area where only unenriched rice has been available. The number of deaths from beriberi has similarly declined, from 263 per 100,000 persons in the experimental area in 1947-48 to 28 per 100,000 in 1949-50. This latter mortality rate is only a small fraction of the lowest annual rate ever previously recorded for the area. The enriched rice contains 2 mg. thiamine, 16 mg. niacin, and 13 mg. of iron per pound, the U. S. Federal Standard for enriched flour and enriched corn meal.

—J. Nutrition 42 :501 (Dec.) 1950.

Dr. Arimoto

The author of this issue's lead article has been chief of the Nutrition Section, Public Health Bureau of Welfare Ministry, since 1946. In December, 1950, he was appointed director of the National Institute of Nutrition. He is director of the Japan Nutritionist Association and councillor of the Japanese Society of Food and Nutrition, as well as serving with other national groups. Dr. Arimoto recently visited this country to study sanitation and health education methods.

Health and Fitness

The present national emergency has made educators increasingly aware of the need for preparing children to meet demands they will face as adults. Commissioner of Education Earl James McGrath emphasizes the need for every child to have organized health instruction based on scientific information which will lead to desirable habits and attitudes and appreciation of physical and mental health.

Food Conservation

Study of methods to use dairy by-products has resulted in a new use for a nutritious food which largely has been fed to livestock or discarded. The Bureau of Dairy Industry, United States Department of Agriculture, has developed a method to use sweet-cream buttermilk to make flavorful ice cream. It is estimated that approximately 600 million pounds of sweet-cream buttermilk are produced annually in the United States containing about 50 million pounds of valuable milk solids.

A TRAINING PROGRAM FOR SCHOOL LUNCH PERSONNEL

By Harriett M. Searles, Chairman
School Lunch Committee, Chicago Nutrition Association

Training is like food—if it is needed and good—more is wanted. In planning voluntary in-service training activities, we must be aware of the needs for assistance and offer suggestions in a form easily assimilated. By whom? By those who express their needs and ask for guidance.

Because needs may not be recognized readily by personnel, training is a slow process, especially when offered at the group's convenience and by volunteers. Months and even years can go by until the sparring period gives way to the easy relationships necessary for acceptance of practical training activities; but "easy does it."

Planning and execution of training activities for school lunch personnel, school administrators, and program sponsors is the job and pleasure of the school lunch committee of the Chicago Nutrition Association, active for a number of years. We have found that the "what, when, and where" of a continuous program certainly are not entirely for committee decision.

This committee presents several programs each year to cover such school lunch interests as administration, supervision, management, cookery. Each interest needs specifics but time allows so little if all subjects are attempted. We are increasingly selective. This has come about through our study of response and attendance.

Kinds of Programs

The majority in any one interest determine the kind of program presented. Luncheon meetings limit attendance of cooks and school administrators. Lunchroom managers, sponsors, and interested professional people outside the operating personnel make up the majority. At afternoon meetings cooks and school administrators from nearby schools can attend in addition to the first group. But evening meetings "with supper" draw managers, cooks, and sponsors in greater numbers. Thus the hour of meeting influences the kind of program presented. Place is another factor. Because we plan for schools in suburban Cook County, and for private and parochial schools in Chicago, we reach larger groups when a meeting is held in a suburban area.

This influence of time and place is recognized. Thus our current program, a luncheon meeting at the Milk Foundation, is planned for managers, manager-cooks, sponsors, and cooks who can get substitutes that day. We are presenting two subjects. Our subjects are: "Building Food Acceptance" covering recipe development, food merchandising, menu planning; "Operational Factors in the School Lunch Program" covering meal charges and count, participation, the long line. Our speakers, other committee members, and one or two managers chosen from the group promote audience participation and answer questions.

Continued attendance at these programs over the last five years has given the groups encouragement to ask for what they want presented, and when and where they want it. The committee is pleased with requests like—"let us have four meetings a year"—"can we meet just before school opens in the fall"—"we want more about recipes — menus — dining room discipline—meal charges—short cuts in cooking—devices to save labor—demonstrations on using government donated foods." Operating personnel is speaking. We reach more of them after school hours. Our efforts have led us to easier planning, but more programs.

The committee of ten, all volunteers, may go outside its membership for a speaker, but in general each member works. All plan. Some contribute in the mechanics of securing attendance; others in the program, giving talks, illustrations, demonstrations.

Interest is growing among school administrators for information on the training program. We hope to meet this need by cooperating with the State School Lunch Administration. A meeting of school administrators is under consideration, with state lunch program director, a representative of the U. S. Department of Agriculture, and a lunchroom dietitian as participants.

FOOD AND AGRICULTURE IN TURKEY

By Ada Mayne Kadderly, Ankara, Turkey

Editor's Note: Mrs. Kadderly, traveling in Europe under circumstances which enable her to become acquainted with rural life, sends glimpses of the friendly Turkish farm people and the present concern for improved farming and living conditions. Mrs. Kadderly is on leave of absence from the Oregon Dairy Council.

Early one morning in December, I was eager for the experience we were to have that day—a visit to a farm village on the Anatolian Plain.

We had been in Turkey five weeks. Istanbul, fascinating with its mosques and minarets, had been a colorful introduction. Scattered over Turkey are ruins of past civilizations—fallen pillars, relics of marble streets, bathhouses, amphitheatres. Of more personal interest was mingling with the crowds in narrow, winding streets with labyrinths of bazaars—colorful food, fish, and spice markets. Turks love to bargain. I have watched heated transactions over a huge green cabbage or a slippery fish.

The "milkman" in Turkey leads his donkey, cans hanging from either side, through the streets. He dips with a cup from one can or the other depending upon the customer's choice. Curiosity led me to peer into these cans. One held sheep's milk, the other a brown liquid, "gazone"—the whey from butter and cheese.

As we left Ankara, that bristling city with a Western appearance, and drove into the farming area of the Anatolian Plain, we passed camel caravans, slow oxen pulling cumbersome carts, peasants in colorful dress on foot or donkey. It was like another world.

Farmers live in villages and often travel long distances to their land. Villages are on hillsides or at the foot of hills where water is available. Adobe houses with dirt floors and roofs house livestock as well as family.

Farms average less than ten acres and provide subsistence for family and livestock. Nutritive level is low for both. The average farmer plows, sows, and reaps with oxen, water buffalo, or by hand. Women harvest wheat, barley, and oats with hand cycles. But changes in farm practices are taking place. The "taxi" tractor and the seed cleaning and treating machines, at first looked upon with suspicion, now are used. A taxi tractor is owned by a

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—that there are 274 individual nutrients in milk?

—that spearmint flavor now can be synthesized from peels of oranges and grapefruits?

—that filbert nuts contain enzymes which are used in making superior flavored cheddar cheese?

—that the maternal mortality rate in the United States is slightly below one death per one thousand live births?

—that recent research indicates that coldness of ice cream has no effect on pulse, blood pressure, body temperature, and skin temperature?

—that a device has been patented which holds a cow's tail at milking time?

—that the Romans describe butter as "an exquisite food, one of those which distinguishes the rich from the rabble"?

—that freshmen men in 1916 were an average of 67.45 inches in height and 132 pounds in weight and at present are an average of 70.19 inches in height and 154 pounds in weight?

THINGS YOU'LL LIKE TO READ

Teaching Better Nutrition—A Study of Approaches and Techniques — Nutritional Studies No. 6. Jean A. S. Ritchie. Washington, D.C.: Food and Agriculture Organization of the United Nations. November, 1950. $1.50.

To improve world nutrition, practical measures, such as increased food production, depend too upon education in sound food habits. This book discusses food patterns, organizing educational programs, training workers, teaching methods and materials, and evaluation tools. Teaching better nutrition from various approaches—agriculture, civic, home economics, literacy, rural school, family—are described by examples from many countries.

Activities — In Nutrition Education—A Unit for High School Classes—Elizabeth A. Lockwood for Department of Nutrition, Harvard School of Public Health. New York: The Nutrition Foundation, Inc. 1950. $1.00.

This booklet represents part of a continuing research study to determine whether nutrition education could be incorporated into ordinary curriculum and would result in improved health and better understanding of food in relation to health. The detailed booklet is prepared primarily to aid biology teachers in incorporating nutrition education. Typical problems are: Why Do I Need Food? Does It Make Any Difference What I Eat?

FOOD AND AGRICULTURE IN TURKEY

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province, village, or individual for custom work on farms that cannot afford one. Patiently, farmers wait their turn for a seed cleaning machine in the local agricultural station.

Upon arrival at the village, we saw a tractor in action in the field. After demonstration and discussion, we went to the home of three brothers and their father before them — prominent villagers. The men stepped out of their shoes before they entered a room about ten by fifteen feet. This was a prosperous home, for in the center of the room stood a small square table surrounded by four straight chairs. The floor was covered with worn, clean Turkish rugs. Cushions on the floor and against the walls were occupied by the village men. One brother solemnly brewed tea over the heating stove. Another entered with a large, copper tray, laden with chunks of white butter, goat's cheese, freshly-made flat bread. Sweet tea was served in small pinched glasses. The bread, torn apart, was eaten from one hand, butter or cheese from the other—that simple. Appetites satisfied, cigarette smoke filled the friendly room.

I, the only woman present, tried vainly for a glimpse of the woman responsible for the good food. I asked our interpreter if I might see the kitchen. Even he looked startled. But, after some discussion, one of our hosts disappeared, then returned to invite me into a low room lighted by a small sky light. A fireplace was in a corner. Coals were burning at one side of the hearth; the fuel, dried cow manure, was piled on the other side—there is no other fuel. On the wall hung bright copper pans and kettles. On a long shelf were copper jugs and jars.

I tried to identify the kettles used for making yoghurt for all Anatolian women make yoghurt. Yoghurt, from sheep's milk, is a standard part of the diet. I asked an interpreter why. "It cleans out the tubes," he replied. Whatever the reason, it makes up for much that is lacking in the diets.

The present Turkish administration is committed to a program to improve living conditions in villages. With over eighty percent of the twenty million people living in some forty thousand villages it is a program of tremendous proportion. An agricultural extension program is under way with advisors from the United States. The director, an able Turk, is a graduate of one of our state universities. Many Turks are in our schools studying extension methods and technics in special fields of agriculture. Agricultural schools in Turkey are increasing; the University of Ankara has a home economics school.

When asked his opinion of the taxi tractor, one villager said that in addition to better crops it gave him time to think. Time to think may well be an important step in the improvement of living standards in rural Turkey—as elsewhere.